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EXAMINER

EISEN, ALEXANDER

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/920,337

Applicant(s)

STERN ET AL.

Examiner

Alexander Eisen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The objection to the drawings to under 37 CFR 1.83(a) is withdrawn in view of the Applicant's argument.

Claim Objections

2. The objection to claim 18 is withdrawn necessitated by the Applicant's amendment.

Claim Rejections - 35 USC § 112

3. The rejection of claims 26-27 under 35 USC 112(1) has been withdrawn in view of Applicant's arguments.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3-6, 8 and 10-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kuga, US 5,686,940.

With respect to claim 1 Kuga discloses a computer system for monitoring the use of a display (1) by a user and having a display (1) performing a task (manipulating images, scrolling, zooming etc.); and a first sensor (2) positioned relative to display and being a distance light

Art Unit: 2674

sensor. An analysis of the measurement is output from a computer (5) to a driver circuit (6) for controlling the display (1) accordingly to the detected distance.

As to claim 3 the display in Kuga's system is LCD.

As to claims 4 and 11, the sensor is incorporated into a supporting structure of the display and placed on the top of the display (col. 2, lines 48-49).

As to claim 5, CCD is made of a plurality light sensors (pixels) (col. 2, lines 49-55).

As to claim 6, the sensor is the imaging sensor (CCD).

As to claim 8, the system comprises a computer (5) for processing inputs from the sensor (col. 3, lines 29-43).

As to claim 10, the sensor is positioned to monitor the display depending on the display distance from the user.

As to claim 12, the user constitutes a remote input device (col. 4, lines 22-27) by controlling various computer related tasks, such as scrolling or zooming, for example, by changing the distance between the display and the user.

As to claim 13, the sensor is a distance sensor (col. 2, line 48).

As to claim 14, the sensor is a light sensor (col. 2, lines 49-53).

6. Claims 15 and 17 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Fateh et al., ("Fateh"), US 6,076,928.

With respect to claims 15 and 17 Fateh discloses a computerized method for determining a viewing distance including positioning a user in front of a display, allowing the distance sensor to measure a viewing distance and receiving the analysis of the measurement and notifying a user of measured distance (372 in FIG. 12; col. 7, lines 2-15). The analysis of the measurement

Art Unit: 2674

includes notifying a user when a user is not at a proper distance from the display (see col. 5, lines 6-12).

7. Claims 18-19 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by NEC SOFTWARE LTD, ("NEC"), JP 2000-098991.

With respect to claim 18 NEC discloses a method for determining a light setting for a user using a display for performance of a task using a light sensor 12 positioned in a known position relative to the display, the method comprising positioning the user in front of the display and allowing the light sensor to measure ambient light in the environment of the user and receiving and analysis of the light measurement (see English translation of the abstract and Japanese application supplied with the previous Office action).

As to claim 19, the method further comprises suggesting a change in light amount in the environment (and changes it by automatically controlling the brightness of the display).

8. Claims 18 and 19 are also rejected under 35 U.S.C. 102(e) as being clearly anticipated by George, US 6,606,130 B1.

With respect to claim 18 George discloses a method for determining a light setting for a user using a display using a light sensor (sensors S1-S8 in FIG. 1) positioned to a known position relative to the display, positioning the user in front of the display, and allowing the light sensor to measure light in the environment of the user, receiving an analysis of the measurement.

As to claim 19, George further teaches that the method comprises suggesting a change in light amount in the environment (col. 5, line 55 - col. 6, line 10).

9. Claims 26 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Wong, US 6,690,351.

Art Unit: 2674

With respect to claims 26 and 35 Wong discloses a computer system with a display having different type of sensors, such as temperature, noise, light, distance sensors (FIG. 2; col. 5, ll. 36-63) and software for processing the inputs from the sensors.

10. Claim 27 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by NEC-Okubo, JP 08-292752.

NEC-Okubo discloses a display for use by a user comprising a display 11; a first sensor 6 positioned close to the display; and three light sensors 3-5 positioned to determined a source of ambient light relative to the user (abstract; FIG. 1).

11. Claims 32-34 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Wawro et al., ("Wawro"), US 5,838,424.

In regard to claim 32 Wawro discloses a system for eye examination comprising a display (CRT 54); a first sensor (74) positioned close to the display and being a light sensor (col. 6, lines 56-64); and a software program for processing inputs from the sensor and for displaying a test pattern on the display (col. 3, lines 38-55; col. 5, line 58 - col. 6, line 31).

As to claim 33, the test pattern can be an acuity test or a visual field test etc. (col. 3, lines 45-55).

As to claim 34, Wawro teaches a second sensor (76) distinct from the first sensor (74).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2674

13. Claims 2, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuga in view of Richardson et al., ("Richardson"), US 6,433,759 B1.

Kuga discloses a computer system for monitoring the use of a display (1) by a user and having a display (1) performing a task (manipulating images, scrolling, zooming etc.); and a first sensor (2) positioned relative to display and being a light sensor.

Kuga does not disclose a communication link between the system and a computer system accessible by hypertext protocol, or that the sensor is connected to the system through a cable and capable of monitoring blink rate.

Richardson teaches a computer system having light sensors for controlling a computer (FIG. 2), wherein the system is connected to the Internet (col. 4, lines 18-31), the imaging sensors (112 and 122) housed in a headset (70) is connected to the computer through a cable (62); and the system is capable of monitoring blink rate (FIG. 18; col. 4, lines 38-46).

It would have been obvious to one of ordinary skill in the art at the time when the invention was made to modify the system of Kuga by the teachings of Richardson by adding the ability to detect a blink rate, since Kuga lends itself conveniently to incorporating this feature by already having built-in imaging sensor for detecting a distance, because it would allow to emulate "mouse clicks" and provide additional instructions to the computer (Richardson; col. 4, lines 43-46; col. 13, lines 17-62).

14. Claims 16, 22, 23, 24, 25 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over NEC in view of Fateh.

Art Unit: 2674

With respect to claims 16, 22, 23 and 25 NEC discloses a display system comprising a display (1); a first sensor (13) being a distance sensor and a second sensor (12) being distinct from the first sensor, such as a light (luminance) sensor.

While NEC discloses that an automatic analysis of measurement by the distance sensor the distance between the display and a user includes automatic control of the display brightness, it does not disclose that this analysis comprises a notification when a user is not in a proper viewing distance.

Fateh teaches a computerized method for determining a viewing distance including positioning a user in front of a display, allowing the distance sensor to measure a viewing distance and receiving the analysis of the measurement and notifying a user of measured distance (372 in FIG. 12; col. 7, lines 2-15). The analysis of the measurement includes notifying a user when a user is not at a proper distance from the display (see col. 5, lines 6-12).

It would have been obvious to one of ordinary skill in the art at the time when the invention was made to improve NEC using the method provided by Fateh, because it would allow not only adjust the brightness of the display according to environment, such as an ambient light, but also to notify a user when he or she is not in proper distance from the display, i.e. further improve the user's comfort and ease of using the display without additional strain.

With respect to claim 24 NEC discloses a display system comprising a display; a first sensor being a distance sensor and a second sensor being a light (luminance) sensor, and a distance sensor measuring the distance from the light sensor to the user's body.

NEC does not disclose that the second sensor is incorporated into a first sensor, but it would have been obvious to one of ordinary skill in the art at the time when the invention was

Art Unit: 2674

made that the two sensor have to be positioned closes in order to perform the above measurements and therefore “the constituents parts can be so combined as to constitute a unitary whole”, i.e. to make these parts integral. See *In re Larson*, 144 USPQ 347 (CCPA 1965).

As to claim 28, the readings from sensors 12 and 13 (FIG. 1) are input into a computer (2), which controls the brightness and contrast based on the readings and setting criteria storage means (31) (paragraphs [0018-0023]). The process is shown in flow-chart in FIG. 3, and it is inherent for a computer to run on corresponding to this chart software program.

As to claim 29, the computer system of NEC determines a user’s viewing distance from the output of the distance sensor (13).

As to claims 30 and 31, the computer system of NEC, which runs on software program accepting sensor input representing distance and light measurements over time.

15. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fateh in view of Jeon, US 5,877,841.

Fateh discloses a method for determining a recommended viewing distance for a user viewing display comprising displaying a suggestion regarding recommended viewing distance (FIG. 12; col. 7, lines 7-15).

Fateh does not disclose that the displaying of recommended viewing distance is based on query and response to the query.

Jeon teaches an eye examination system presenting test patterns and based on interaction between a user and system, such as query, which is responded to by the user, and measured distance between the user and a display (FIG. 8A-H; column 3, line 44 - column 50).

Art Unit: 2674

It would have been obvious to one of ordinary skill in the art at the time when the invention was made to provide Fateh with the test ability of Jeon, because it would allow Fateh to display recommended distance for viewing a display, by optimizing this distance value based on the test performed by Jeon, wherein a user's perception is measured based on the distance, i.e. to include the user's vision acuity as a factor into a recommendation.

16. Claim 21 is rejected under 35 U.S.C. 102(b) as unpatentable over Jeon.

Jeon discloses a method for testing a user's vision using a display comprising positioning a user in front of the display, displaying a test pattern (col. 50-65; FIGS. 8A-H) according to an acuity test, selecting a test result (by user's response to his/her perception of the pattern (characters of different sizes or Landolt circles), and receiving an analysis of test result (notifying the user of measured eyesight, see claim 14 of Jeon). As to the color, accommodation and an acuity test based on "C" (practically, Landolt circles), these methods and test parameters are well known in the art and it would have been obvious to one of ordinary skill in the art at the time when the invention was made that Jeon's apparatus would be able to perform those simple test, given that it uses color CRT screen (col. 4, ll. 28-44) and provides images of Landolt circles (FIG. 5; col. 5, ll. 51-65).

17. Claims 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al., ("Mitchell"), US 4,832,419 in view of Fateh.

Mitchell discloses a method for reducing eye and muscle strain of a user of a display comprising the steps of positioning the user in front of the display for performing a task and providing a mechanical apparatus (mechanism for adjusting height and viewing angle), wherein

Art Unit: 2674

the mechanical apparatus is capable of moving the display up and down, towards and away from the user (FIGS. 1-5; col. 1, lines 55-68).

Mitchell does not disclose a distance sensor for measuring a viewing distance.

Fateh teaches a computerized method for determining a viewing distance including positioning a user in front of a display, allowing the distance sensor to measure a viewing distance and receiving the analysis of the measurement and notifying a user of measured distance.

It would have been obvious to one of ordinary skill in the art at the time when the invention was made to add the features of Fateh to the display adjusting mechanical apparatus of Mitchell, because it would improve the latter by notifying the user when the adjustment is needed.

As to claim 37, it is well known in the art the advantage of making certain operations automatic (see, for example, *In Re Venner*, 120 USPQ 192 (CCPA 1958)). Furthermore, it is well settled that it is not invention to broadly provide a mechanical or automatic means to replace manual activity, which has accomplished the same result. In *Re Rundell*, 18 CCPA 1290, 48 F.2d 958, 9 USPQ 220.

Response to Arguments

18. Applicant's arguments with respect to claims 16, 21-31 and 35 have been considered but are moot in view of the new ground(s) of rejection.

19. Applicant's arguments with respect to claims 1-15, 17-19 and 32-34 have been fully considered but they are not persuasive.

Art Unit: 2674

With respect to independent claim 1 Applicant argues that "Office Action has failed to show that Kuga discloses "a means to notify user when user is not at proper viewing distance" as presently claimed, for example, in claim 1". The limitation argued is not in claim 1 and therefore this argument is deemed to be invalid.

Applicant also disagrees with examiner's assessment that a user in Kuga constitutes an input device, supporting the argument based on Kuga's assertion that its invention is directed to avoid use of any input device. Examiner respectfully disagrees. While Kuga's intentions well may be to avoid using of any input devices, the function of the display in Kuga are controlled by user, who constitutes, in a broad sense, an input device in that case.

Applicant further argues that Fateh does not disclose a light sensor in reference to claim 18. Claim 18 has been amended and new grounds of rejection of claim 18 are presented in current Office Action. Nevertheless, examiner reinstates the validity of previous rejection and brings attention of the Applicant to Fateh col. 7, lines 2-4, wherein infrared distance sensor is suggested (meaning infrared light sensor).

Applicant further argues that with respect to claims 15 and 17 Fateh fails to teach "notice when user is not at proper position" or "software program that is capable automatically notifying the user when user is not at proper position". Examiner respectfully disagrees. Fateh teaches an automatic feedback device notifying a user when a user is not in proper position (see FIG. 6; col. 4, line 59- col. 5, line 12).

In regard to the rejections of claims 16, 22, 23, 25 and 28-31 and related NEC reference Applicants assert that they were unable to read and understand the Japanese application, and further that the English abstract does not clearly provides for what is being disclosed. Examiner

Art Unit: 2674

also was unable to read and understand Japanese application and therefore supplied the previous Office Action with the English translation of the abstract and the application (please kindly find it following Japanese text of the application). As to the English abstract, while the translation is not perfect, if there is such thing, it still clearly articulates the main purpose and way of practicing the invention. As understood by the examiner, the purpose of the invention is to automatically control the brightness and the contrast of the display in accordance with the distance of an operator from the display and the intensity of an ambient light. The PROBLEM TO BE SOLVED part states: "To dynamically control the brightness and contrast of a display screen in accordance with the change of the distance between an operator and the display picture [and] not only peripheral brightness [ambient light]". The part SOLUTION explains how the problem is solved: "display 1 is provided with an illuminance sensor [light sensor] 12 for measuring environmental illuminance [ambient light] in the vicinity of the display screen 11 and a distance sensor 13 for measuring the distance between the operator... and the display screen 11, and a computer 2 is provided with brightness/contrast control means 21 for controlling... with these outputs [ambient light intensity and distance]". And the last lines of the abstract look self-explanatory.

Applicant also argues with respect to claims 18-19 and relevant George reference that George is not analogous art because it concerned with "A projected image" and requires to precisely overlaying three projected images and so on. Examiner respectfully disagrees. The reference is analogous art and belongs to display systems. For example, color CRT also has three electron beam projectors, which project three images that are also needed to be precisely overlaid. Applicant further argues that George failed to disclose "a display for performance of a

Art Unit: 2674

task". Since claim language does not define particularities of "a task", watching the display in George is a task enough for a user.

Applicant also argues that Jeon fails to teach the conduct of a test for amplitude of accommodation, or color test. These test are well known in the art and the obviousness of Jeon's capabilities to perform those ordinary test are addressed in the rejections.

With respect to claim 32-34 and Wawro reference Applicant argues that sensors in Wawro are position sensors and not "the distance sensor of the present invention", which is "for monitoring the actual distance of the user", and that the light sensor is for measuring "ambient light in the user's environment" referring to specification at [0008] and [0011]. It is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With respect to claims 2, 7, 9 and 20 Applicant argues that Office Action fails to establish motivation for combination of references. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case (claims 2, 7 and 9), Richardson teaches using eye blinking for inputting commands to a computer and Fateh presents a computer system, wherein a user inputs commands, and therefore combining the two would not bring about any

Art Unit: 2674

unexpected result while would allow to have less number of input devices, given that the command can be inputted as taught by Richardson. As to claim 20, Fateh measures the distance between a user and a display and notifies the user if he is not at proper viewing distance. One of ordinary skill in the art familiar with Fateh, would definitely search for what is "proper viewing distance" or how to measure it. Jeon will provide an answer.

The rejections are maintained.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Eisen whose telephone number is **(703) 306-2988**. The examiner can normally be reached on M-F (8:30-4:00).

Art Unit: 2674

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on (703) 305-4709.

Any response to this action should be **mailed to:**

Commissioner of Patents and Trademarks

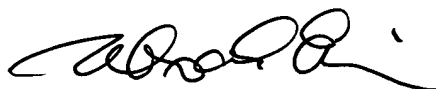
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or **faxed to:**


(703) 872-9306 (for Technology Center 2600 only).

Hand-delivered responses should be **brought to:** Crystal Park Two, 2121 Crystal Drive, Arlington, Virginia, Sixth Floor Receptionist.

Any inquiry of a general nature or relating to the status of this application or proceeding should be **directed to:** Technology Center 2600 Customer Service Office, whose telephone number is (703) 306-0377.



Alexander Eisen
June 18, 2004


6/25/04
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